

**Notice of Allowability**

Application No.

09/776,067

Examiner

Sudhanshu C. Pathak

Applicant(s)

REZVANI ET AL.

Art Unit

2634

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to April 4<sup>th</sup>, 2005.
2. ☒ The allowed claim(s) is/are 2-4 & 8 and re-numbered as claims 1-4.
3. ☒ The drawings filed on April 4<sup>th</sup>, 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (-as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### DETAILED ACTION

1. Claims 2-4 & 8 are pending in the application.
2. Claims 1, 5-7 & 9-21 have been canceled.

### EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Charles C. Cary on May 11<sup>th</sup>, 2005.

In order to avoid a Drawing Objection the specification has been amended as follows:

- On Page 3, line 21 **replace** "FIG. 1 depicts an overall system environment in which individual subscribers" with  
.....FIG. 1 depicts an overall system environment, implementing an embodiment of the invention, in which individual subscribers.....

In Order to avoid a 35 U.S.C. 112 2<sup>nd</sup> Paragraph rejection the claims have been amended as follows:

- In Claim 8, line 1 **replace** "The X-DSL modem of Claim 7" with  
.....The X-DSL modem of Claim 2.....

***Allowable Subject Matter***


4. Claims 2-4 & 8 and re-numbered as claims 1-4 respectively are allowable over the prior art of record because the cited references do not contain the specified limitation of an X-DSL modem supporting both a discrete multi-tone (DMT) line code and a carrierless amplitude and phase modulated (CAP) line code and the modem comprising: a plurality of discrete components coupled to one another to form a transmit path and a receive path for processing data associated with at least one communication channel which exhibits either a DMT line code or a CAP line code; and the components including: an encoder component coupled to the transmit path for encoding data associated with the at least one communication channel exhibiting the CAP line code into OAM symbols and encoding data associated with the at least one communication channel exhibiting the DMT line code into DMT sub- symbols; a Fourier transform component with an input coupled to the encoder component on the transmit path for transforming DMT sub-symbols associated with the at least one communication channel exhibiting the DMT line code from a frequency-to-time domain and transforming QAM symbols associated with the at-least one communication channel exhibiting the CAP line code from the time-to-frequency domain followed by a filtering step in the frequency domain and a subsequent transformation back from the frequency-to-time domain to effect a pulse shaping function on transmitted data associated with the at least one communication channel exhibiting the CAP line code without requiring a discrete pulse shaping component in the transmit path.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhanshu C. Pathak whose telephone number is (571)-272-3038. The examiner can normally be reached on M-F: 9am-6pm.

- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)-272-3056
- The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sudhanshu C. Pathak

  
STEPHEN CHIN  
SUPERVISORY PATENT EXAMINEE  
TECHNOLOGY CENTER 2600